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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,471	11/08/2001	Robert Summers	MGNC-45c	1866

20986 7590 02/09/2004

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EXAMINER

KIM, PAUL D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 02/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/045,471

Applicant(s)

SUMMERS ET AL.

Examiner

Paul D Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 12-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 11 is/are rejected.
- 7) ☒ Claim(s) 6-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11, drawn to a method of assembling in a predetermined alignment the load beam and flexible circuit, classified in class 29, subclass 603.03.
 - II. Claims 12-19, drawn to a disk drive suspension, classified in class 360, subclass 245.9.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions Group I and II are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as without forming a first plural locator structures on the load beam and a second plural locator structures on the flexible structures.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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4. During a telephone conversation with Mr. Bachand on 2/3/2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-11.

Affirmation of this election must be made by applicant in replying to this Office action.

5. Claims 12-19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "18" and "24" as shown in Fig. 1A have both been used to same part. Also, The location of the common plane P-P is not clear. The reference characters "35, 48, 54, 56, 66" appear misdirected in Figs. 1 and 1A. Also, the Fig. 6 appears to be incomplete. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. The objection to the drawings will not be held in abeyance.

Specification

8. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --A METHOD OF ASSEMBLING IN A PREDETERMINED ALIGNMENT A LOAD BEAM AND FLEXIBLE CIRCUIT--.

Claim Objections

9. Claims 1-11 are objected to because of the following informalities:

Re. Claim 1: The scope of the claimed invention is a process of assembling in a predetermined alignment the load beam and the flexible circuit. Examiner suggests rewriting the claim as a proper process claim such as "...comprising steps of: juxtaposing...; and intersecting...".

After the phrase "predetermined alignment" recited in line 1, change "the" to --a--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The phrase "attaching said first and second plural metal layer to the load beam" recited in lines 2-3 renders the claim vague and indefinite. It is unclear that there is no such a limitation of "the first and second plural metal layers" in the claimed invention.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coon (US PAT. 6,320,729) in view of Coon et al. (US PAT. 6,268,981).

Coon teaches a process of alignment a loan beam and flexure comprising steps of: juxtaposing at a common plane the load beam (14) and the flexure (12, equivalent with a flexible circuit); and intersecting a first plural locator structures (22,24) on the load beam with a second plural locator structures (52,54) on the flexure across the common plane (as best shown in Figs. 6A-6E) to locate the loan beam and flexure in the predetermined alignment (see also. Col. 6, line 51 to col. 8, line 37).

As per claim 2 the first plural locator structures are extending through the common plane and receiving the second plural locator structures respectively as best shown in Figs. 6A-6E.

As per claim 3 the loan beam and flexure are contacted and fixed in location of 58 as shown in Fig. 5D-5E.

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As per claim 4 the first plural locator structures are located at the suspension distal end as shown in Fig. 1.

As per claim 5 the second plural locator structures are located at the suspension proximate end as shown in Fig. 1.

However, Coon does not teach the flexure formed of flexible circuit comprising a laminate of trace conductors and an insulative film. Coon et al. teach a suspension structure including a flexible circuit (18, flexure as shown in Fig. 3) comprising a laminate of trace conductors (26) insulated with the insulative film (24) as shown in Fig. 3 for electrically connecting between the magnetic head slider to the flexible circuit. (see also col. 4, line 47 to col. 5, line 38). Therefore, it would also have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the flexure of Coon by a flexure with the laminate of trace conductors insulated with the insulative film as taught by Coon et al. for the purpose of electrically connecting between the magnetic head slider to the flexible circuit to produce the magnetic head assembly.

As per claim 11, as best understood in view of the rejections under 112 second paragraphs, Coon et al. teach that a metal (22) layer is formed on the flexible circuit as shown in Fig. 3.

Allowable Subject Matter

14. Claims 6-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Heeren et al. (US PAT. 5,920,444) and Symons (US PAT. 5,894,655) are cited to further show the state of the art with respect to method of alignment a loan beam and flexure.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 703-308-8356. The examiner can normally be reached on Tuesday-Friday between 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul D Kim
Examiner
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